



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,511	08/14/2008	Hiroyuki Kodama	5703-000015/US/NP	1685
27572	7590	05/11/2009	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C.			FONTENOT, NIGEL RAI	
P.O. BOX 828			ART UNIT	PAPER NUMBER
BLOOMFIELD HILLS, MI 48303			3768	
			MAIL DATE	DELIVERY MODE
			05/11/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/593,511	<b>Applicant(s)</b> KODAMA ET AL.	
	<b>Examiner</b> NIGEL FONTENOT	<b>Art Unit</b> 3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/10/2007 and 9/20/2006</u>                                  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This action is responsive to the application filed September 20, 2006.

#### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claims 3-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 3 recites the limitation "not only occasionally for a measurement but also for all the time." This limitation is vague and indefinite as it is unclear what applicant means. A clearer limitation is needed in this claim.
4. Claim 4 recites the limitation "detecting an ultrasonic wave echo peak (P) of a posterior wall of the bladder from the reflective echoes of the ultrasonic waves." This limitation needs to be reworded to recite clearer language.

#### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

Art Unit: 3768

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Ganguly et al. (US 6565512).

7. Addressing claims 1-3, Ganguly discloses an ultrasonic urinary volume sensor (see fig. 1) comprising: a probe having a plurality of ultrasonic oscillators for oscillating ultrasonic waves toward a wall surface of a bladder, which is adhesively placed over a body surface in an abdominal section via an ultrasonic wave transmission medium interposed therebetween (see col. 8 lines 17-26); and a processing section for detecting and processing reflective echoes of the ultrasonic waves from said wall surface of the bladder, which have been oscillated by said plurality of ultrasonic oscillators of said probe (see col. 3 lines 64-67, col. 4 lines 6-18, and col. 4 lines 32-42), wherein said plurality of ultrasonic oscillators is disposed along a direction of expansion of the bladder (see fig. 1), in which said probe is adhesively placed over the body surface in the abdominal section such that a lower end of said probe is aligned with an upper end of the pubic bone (see fig. 1; the device is capable of being placed there), in which said probe is adapted to be adhesively placed over the body surface in the abdominal section via said supersonic transmission medium not only occasionally for a measurement but also for all the time (see fig. 1; the device is capable of performing this).

Art Unit: 3768

8. Addressing claims 4-5, Ganguly discloses a processing section (see fig. 3 and fig. 6) operable for: detecting an ultrasonic wave echo peak of a posterior wall of the bladder from the reflective echoes of the ultrasonic waves from the wall surface of the bladder, which have been oscillated by each one of said plurality of ultrasonic oscillators (see col. 4 lines 19-50); executing a multiplication of the detected ultrasonic wave echo peak by a distance between an anterior wall and the posterior wall of the bladder that can be specified from said ultrasonic wave echo peak for each one of said plurality of ultrasonic oscillators (see col. 5 lines 37-65 and col. 6 lines 38-55); executing an addition of respective values from the multiplications to determine a measured indicator value (see col. 5 lines 37-65, col. 6 lines 38-55, and col. 7 lines 15-40); and executing a multiplication of said measured indicator value by a coefficient corresponding to a difference among individuals based on their anatomical structures and a specific posture during the measurement to thereby estimate the urinary volume in the bladder reliably (see col. 5 lines 37-65, col. 6 lines 38-55, and col. 7 lines 15-4), in which said processing section comprises a hardware section and a CPU section, wherein said hardware section is electrically connected to said plurality of ultrasonic oscillators of said probe and said CPU section, and includes a low noise amplifier, an A/D converting circuit, a waveform memory, a timing generating circuit and an ultrasonic oscillator exciting circuit (see figs. 3 and 6).

9. Addressing claims 6-9, Ganguly discloses in which said CPU section comprises a real-time clock for outputting a signal at each predetermined timing (see abstract), and

Art Unit: 3768

said CPU section controls said hardware section in response to said signal output from said real-time clock (see abstract); in which said CPU section comprises a gain control section for controlling a gain of said low noise amplifier, and an amplification factor for said low noise amplifier is automatically controlled by said gain control section (see col. 5 lines 37-51); further comprising, a detachable storage medium, wherein said CPU section is electrically connected to said storage medium (see col. 8 lines 37-51); further comprising, a wireless data communication function, wherein said CPU section is electrically connected to said wireless data communication function (see col. 8 lines 37-51 and fig. 6).

### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 3768

12. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ganguly et al. (US 6565512) as applied to claim 5, in view of Hashimoto et al. (US 2002/0091326).

13. Addressing claim 10, Ganguly does not specifically disclose a triaxial acceleration sensor. However, Hashimoto discloses a system that uses a triaxial acceleration sensor to determine posture and inclination of a human body. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Ganguly by incorporating the triaxial acceleration sensor, as disclosed by Hashimoto, to determine posture and inclination of the human body to facilitate placement and operation of Ganguly's transducer on the human body.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NIGEL FONTENOT whose telephone number is (571)270-7032. The examiner can normally be reached on Monday-Friday (7:00a-4:00p).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3768

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/N. F./

Examiner, Art Unit 3768

/Long V Le/

Supervisory Patent Examiner, Art Unit 3768